

## **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, or claims in this application:

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### **Listing of Claims:**

4. (Currently amended) A system for controlling a hydraulically ~~activated~~ operated downhole tool for use in a well bore, the ~~comprising~~ a hydraulically operated tool including a hydraulically operating mechanism controlled by fluid pressure; ~~and, the~~ system comprising:
- 10 a control sub comprising a tubular assembly having an inner sleeve and an outer sleeve sealingly engaged to each other and a through passage between an inlet and a first outlet, the inlet being adapted for connection on a workstring, the first outlet being
- 15 adapted for connection to the hydraulically operated tool, one or more radial outlets extending generally transversely of the tubular assembly, an obturating member moveable between a first position permitting fluid flow through the one or more radial outlets and a second position closing the one or more radial outlets,
- wherein the obturating member is moved from the first position to the second position by
- 20 a compressive force applied from the hydraulically operated tool; and wherein movement of the obturating member regulates the fluid pressure from the first outlet to hydraulically control the hydraulically operated tool.
2. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim 1 wherein a cross-sectional area of the first outlet is greater than a cross-sectional
- 25 area of the each radial ~~second~~ outlet.
3. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in

Claim 1 wherein the compressive force occurs from the hydraulically operated tool remaining static relative to movement of the workstring and the control sub.

4. (Cancelled).

5. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim ~~[[4]]~~ 1 wherein the outer sleeve is adapted to connect to the workstring and the inner sleeve is adapted to connect to the hydraulically operated tool.

6. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim ~~[[4]]~~ 1 wherein the inner and outer the sleeves include mutually engageable faces so that the sleeves may be axially slideable in relation to each other over a fixed distance.

7. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim ~~[[4]]~~ 1 wherein the obturating member is a sleeve, coupled to the inner sleeve of the tubular assembly.

8. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim ~~[[4]]~~ 1 wherein the one or more radial ports are located on the outer sleeve.

9. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim 8 wherein matching radial ports are located on the obturating member such that under compression each set of radial ports align to allow fluid to flow radially from the sub.

10. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim ~~[[4]]~~ 1 wherein an outer surface of the inner sleeve includes a portion having a

polygonal cross-section and an inner surface of the outer sleeve has a matching polygonal cross-section.

11. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim 10 wherein the polygonal cross sections are hex cross-sections.
- 5 12. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim ~~44~~ 1 wherein the sub includes an indexing mechanism.
13. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim 12 wherein the indexing mechanism comprises mutually engageable formations on the inner and outer sleeves.
- 10 14. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim 13 wherein the engageable formations comprise at least one pin and a slot into which the pin(s) engage.
- 15 15. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim 14 wherein the slot extends circumferentially around a surface of a sleeve to provide a circumferential path for the pin.
16. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim 15 wherein the slot includes one or more longitudinal profiles as offshoots from the circumferential path to allow the sleeves to move relative to each other to effect the relocation of the obturating member from one position to another.
- 20 17. (Currently amended) A ~~hydraulically activated downhole tool~~ system as claimed in Claim 1 wherein the hydraulically operated tool is an expander tool.

18. (Currently amended) A method of controlling a hydraulically ~~activated~~ operated downhole tool in a well bore, the method comprising the steps:

(a) mounting on a work string, ~~a hydraulically activated downhole tool having a~~ hydraulically operated tool including a hydraulically operating mechanism controlled by fluid pressure, and a control sub, the sub including a first outlet to the hydraulically operated tool and one or more radial outlets through which fluid within the workstring will flow when not obstructed by an obturating member, the obturating member being moveable under a compressive force from the hydraulically operated tool;

(b) running the ~~hydraulically activated downhole tool~~ work string into a well bore with the one or more radial ports of the control sub open; and

(c) locating the hydraulically operated tool on a formation in the well bore;

~~(e)~~ (d) compressing the control sub by setting down weight on the hydraulically operated tool; and

~~(d)~~ (e) using the compressive force to move the obturating member and thereby control the fluid flow through the radial outlets, regulating the fluid pressure from the first outlet ~~to and~~ hydraulically ~~control~~ controlling the hydraulically operated tool ~~and thereby control the hydraulically activated tool.~~

19. (Original) A method as claimed in Claim 18 wherein the ~~method includes the step of~~ running the ~~hydraulically activated tool~~ work string in the well bore with the radial outlets of the control sub in an open position also comprises ~~and~~ circulating fluid within the well bore.

20. (Previously presented) A method as claimed in Claim 18 wherein the method includes the steps of picking up and setting down the weight of the string repeatedly to cycle opening and closing of the radial outlets and thus provide a selective continuous 'on' and

'off' operation of the hydraulically ~~activated~~ operated tool.

21. (Currently amended) A method of expanding a pipe within a casing of a well bore, the method comprising the steps:

(a) mounting on a work string, ~~a hydraulically activated downhole tool having an~~  
expander tool controlled by hydraulic fluid pressure, and a control sub, the sub including  
a first outlet to the ~~hydraulically operated~~ expander tool and one or more radial outlets  
through which fluid within the workstring will flow when not obstructed by an obturating  
member, the obturating member being moveable under a compressive force from the  
~~hydraulically operated~~ expander tool;

(b) running the ~~hydraulically activated downhole tool~~ work string into a well bore with the  
one or more radial outlets of the control sub open; and

~~(c)~~ (d) locating the expander tool on ~~the~~ a pipe to be expanded;

~~(e)~~ (d) compressing the control sub by setting down weight on the expander tool;

~~(d)~~ (e) using the compressive force to move the obturating member and thereby prevent  
fluid flow through the radial outlets;

~~(e)~~ (f) pressuring up the expander tool by fluid pressure from the first outlet; and

~~(f)~~ (g) expanding the pipe using the expander tool at a constant fluid pressure while  
maintaining the compressive force on the sub.

22. (Original) A method as claimed in Claim 21 wherein the ~~method includes the step of~~  
running the ~~hydraulically activated tool~~ work string in the well bore with the radial outlets  
of the control sub in an open position also comprises ~~and~~ circulating fluid within the well  
bore.

23. (New) A method as claimed in claim 18, wherein the step of mounting the control sub on the work string comprises mounting a control sub having an inner sleeve and an outer sleeve sealingly engaged to each other.

24. (New) A method as claimed in claim 21, wherein the step of mounting the control sub on the work string comprises mounting a control sub having an inner sleeve and an outer sleeve sealingly engaged to each other.

25. (New) A system for controlling an expander tool for use in a well bore, the expander tool including a hydraulically operating mechanism controlled by fluid pressure, the system comprising:

a control sub comprising a tubular assembly having a through passage between an inlet and a first outlet, the inlet being adapted for connection on a workstring, the first outlet being adapted for connection to the expander tool, one or more radial outlets extending generally transversely of the tubular assembly, an obturating member moveable between a first position permitting fluid flow through the one or more radial outlets and a second position closing the one or more radial outlets,

the obturating member being movable from the first position to the second position by a compressive force applied from the expander tool to regulate the fluid pressure from the first outlet to hydraulically control the expander tool; and

wherein the sub includes an indexing mechanism to provide controlled operation of the expander tool by selection of the position of the radial ports relative to the obturating member.